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EXAMINER	
LEVITAN, DMITRY	
ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/746,519	KRUMEL, ANDREW K.	
	Examiner	Art Unit	
	Dmitry Levitan	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Amendment, filed on 02/07/05, has been entered. Claims 1-62 remain pending.

Claim Rejections - 35 USC § 112

1. In light of Applicant's amendment, the rejection of claims 27-29, 51 and 52 has been withdrawn.

2. Claims 1-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 limitation "based on source/destination address information" is unclear because it could mean "based on source or destination address information" or "based on source and destination address information".

Claim Rejections - 35 USC § 103

3. Claims 1, 30, 31, 42, 43 and 62 are rejected (as understood) under 35 U.S.C. 103(a) as being unpatentable over Fallside (US 6,326,806) in view of Trimberger (US 5,426,379) and in further view of Salim (US 6,628,653).

Regarding claim 1, Fallside substantially teaches the limitations of the claims:

A method for updating the configuration of a PLD-based filtering system (re-programmable Internet appliance 1:36-52, comprising PHY 102, FPGA 104, PLD 202 and PROM 204 on Fig. 3), operating to filter packets (inherently part of the system, because Fallside teaches music download from Internet 1:14-20 and packet filtering is essential for this function) received from a packet based network (Internet) comprising the steps of:

Operating the PLD system in accordance with the first configuration data (initial configuration 3:40-67), wherein in accordance with the first configuration data, the PLD system receives packets including first packets from the network (receiving packets from Internet 1:65-67 and 2:1-2), filters the first packets and transmits the filtered first packets to an electronic connection (data bus from FPGA 104 to RAM 208 on Fig. 3) coupled to the PLD system,

Receiving second configuration data for the PLD system sent from a computing system (reconfiguration data is sent to FPGA system through the communication channel 4:14-26, inherently from the other computing system), wherein the second configuration data are different from the first configuration data,

Loading the second configuration into the PLD system (load a second configuration 2:13-25),

Operating the PLD system in accordance with the second configuration data (implementing other protocol and application 3:25-39), wherein, in accordance with the second configuration data, the PLD system receives packets including second packets from the network, filters the second packets (inherently part of the system because using other protocol or other application will produce different filtering of packets from Internet) and transmits the filtered second packets to the electronic connection coupled to the PLD system, and

Initiating reconfiguration based on the received packets information (4:31-35).

Fallside does not teach considering the version identification information for the PLD system when receiving new configuration, filtering packets based in part on source and destination addresses information.

Trimberger teaches selectively receiving the configuration data based on the version identification information for the PLD system when receiving new configuration (using different bit streams to program different versions of FPGA 2:26-51).

Salim teaches filtering packets based in part on source and destination addresses information (examining incoming packets to retrieve source and destination addresses to reprogram packet filter 1:54-59 and particularly regarding IP packets 13:30-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add selectively receiving the configuration data based on the version identification information for the PLD system when receiving new configuration of Trimberger and filtering packets based in part on source and destination addresses information of Salim to the system of Fallside to improve the system compatibility with different versions of the configuration data and utilize well known methods of using the packets address to identify the communication protocol or application.

Regarding claims 30 and 31, Fallside teaches using LAN/Ethernet (Ethernet 4:41-44).

Regarding claims 42 and 43, Fallside teaches using non-TCP/IP stack method (Bluetooth and other protocols 4:4-14), FPGA (FPGA 4:15-18).

Regarding claim 62, Fallside teaches partially reconfigurable FPGA (4:63-65).

4. Claims 44- 46 are unpatentable over Fallside (US 6,326,806) in view of Trimberger (US 5,426,379) and in further view of Salim (US 6,628,653)in further view of Xu (Design of a High-Performance ATM Firewall).

Fallside in view of Trimberger and in further view of Salim teaches all the limitations of the parent claim (see above).

Fallside in view of Trimberger and in further view of Salim does not teach using a firewall to filter the packets to the system transmitted from Internet or a second network.

Xu teaches using a firewall to protect the system from viruses transmitted from Internet or any un-secure second network (page 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using a firewall to filter the packets to the system transmitted from Internet or a second network of Xu to the system to increase the system reliability by protecting it from computer viruses.

5. Claims 4, 17-20, 27-29, 32-41 and 47-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside (US 6,326,806) in view of Trimberger (US 5,426,379) in further view of Salim (US 6,628,653) and in further view of Ghani (US 6,215,769).

Regarding claims 4, 19, 20 and 48, Fallside in view of Trimberger and in further view of Salim substantially teaches the limitations of claim 4: operating the PLD system in accordance with first and second configuration data (see rejection of claim 1 above), operating the PLD system loading a third configuration/third packets 2:13-20 in a partial reconfigure mode and a plurality of FPGAs on Fig. 5.

Fallside in view of Trimberger and in further view of Salim does not teach sending fourth packet acknowledges receipt of second packets.

Ghani teaches sending fourth packet acknowledging receipt of second packets (sending ACK messages to the source of the packet transmission, on the receipt of the source packets, Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add sending fourth packet acknowledging receipt of second packets of Ghani to the system of

Fallside in view of Trimberger and in further view of Salim to improve the system reliability by notifying the packet transmission source on receiving the transmitted packets.

Regarding claims 17 and 18, Fallside teaches the PLD system processes packets sent from the computing system to determine if the packets contain commands to the system and extracts the commands to which the PLD system is responsive (Fallside system processes the reconfiguration data it receives, Fig. 3 and 3:40-63, inherently identifying and extracting the commands from the received packets, because the commands are essential for the receiving the reconfiguration data).

Regarding claims 27-29, Fallside in view of Trimberger and in further view of Salim does not teach that the plurality of PLD system collectively respond to a plurality of commands that include commands to which the PLD system respond and commands to which the PLD system does not respond.

Klimenko teaches a boot file comprising a plurality of commands to which the client may or may not respond to (Fig. 4A and 4B).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a plurality of commands to which the client may or may not respond to of Klimenko to the system of Fallside in view of Trimberger and in further view of Salim to improve the system efficiency, because sending plural commands at the same time makes system more efficient.

Regarding claims 32, 39 and 40 Fallside does not teach the network comprising UDP, IPX or broadcast packets.

An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to make the system compatible with these well known protocols.

Regarding claims 33-38, Fallside teaches the network comprising TCP, Ethernet, link layer network layer and transport layer packets (Ethernet 4:40-47, TCP/IP protocol 4:1-14).

Regarding claim 41, Fallside teaches the packets sent by the PLD system comprise packets with a predetermined source address directed to a second predetermined port (inherently part of TCP/IP protocol 4:1-14).

Regarding claim 47, Fallside does not teach the PLD system comprises a portable computer, however Fallside teaches his system as a part of Internet appliances.
An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to implement the Fallside system in widely popular device.

Regarding claim 49, Fallside does not teach the PLD system commands comprises XML code.
An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to make the system compatible with a widely used standard.

Regarding claims 50-52, Fallside teaches a first logic unit that processes packets sent by a computer system, wherein the first logic identifies one or more commands in the packets sent by the computing system (FPGA responding to reconfiguration data on Fig. 3, abstract and 3:40-67,

4:1-63) and the PLD system including second and third logic units coupled to the first one and carrying out operations that correspond to the commands (a plurality of FPGAs on Fig. 5).

Regarding claim 53, Fallside does not teach first and second logic portions, wherein the first does operate to the packets in accordance with a protocol with the computing system and the second does not.

An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to make the system reconfigure itself.

Regarding claim 54, Fallside does not teach that the computing system operates in response to software that is transmitted to the computing system from the PLD system.

An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to make the system less costly and more versatile by using software instead of the hardware.

Regarding claim 55, Fallside does not teach that the computing system operates in response to software that is stored in a location identified by a packet from the PLD system.

Klimenko teaches a system wherein software resides on the server (Fig. 4A and 4B).

It would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to free up resources on the PLD system.

Regarding claims 56-58, Fallside does not teach that the location comprises a storage location on a second network coupled to the computing system, identified by a network address and the location is determined from an identifier for the PLD system.

An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside to make the system compatible with commonly used Storage Area Networks, accessible through Internet using IP addressing.

Regarding claims 59-61, Fallside teaches the system performing a first process in accordance with the first configuration data and a second process in accordance with the second configuration data (FPGA initialization and reconfiguration processes on Fig.3 and 3:40-67 and 4:1-63), wherein the system after the first configuration reconfigures and no longer perform the first process, wherein after loading the second configuration data, the system operates in the second configuration and does not operate to receive packets in accordance with the commands (the FPGA operates in initial configuration and after the reconfiguration does not operate in initial configuration 3:40-67 and 4:1-63).

6. Claims 2, 3, 5-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside in view of Trimberger and in further view of Salim in further view of Rasmussen (US 6,640,334).

Regarding claims 2, 3, 5, 6, Fallside in view of Trimberger and in further view of Salim substantially teaches the limitations of parent claims, including saving the second configuration in the system memory (RAM 208 on Fig. 3).

Fallside in view of Trimberger and in further view of Salim does not teach using non-volatile memory.

Rasmussen teaches using non-volatile memory (using Flash memory, abstract and column 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using non-volatile memory of Rasmussen to the system of Fallside in view of Trimberger and in further view of Salim to improve the system independence from power loss.

Regarding claim 7, Fallside in view of Trimberger and in further view of Salim in further view of Rasmussen substantially teaches the limitations of parent claims.

Fallside in view of Trimberger and in further view of Salim in further view of Rasmussen does not teach the computing system sends a fifth packet to the PLD system, wherein, in response to the fifth packet, the PLD system saves data indicating that all of the second configuration data has been received and stored in the non-volatile memory.

An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside in view of Trimberger and in further view of Salim in further view of Rasmussen to improve the system reliability since acknowledgements would tell the system that the configuration data was properly received.

7. Claims 8-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside in view of Trimberger and in further view of Salim in further view of Packeteer (PacketShaper Getting Started Version 4.09).

Regarding claim 8-11, Fallside in view of Trimberger and in further view of Salim does not teach loading the second configuration data in response to a command from user, wherein the user command comprises an input from a physical switch on the PLD system or a command entered via a computing system..

Packeteer teaches using a power switch to enable/disable function of a device (page 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using an input from a physical switch of Packeteer to the system of Fallside in view of Trimberger and in further view of Salim to increase the system flexibility by empowering the user to change the system configuration.

Regarding claims 12-14, Fallside in view of Trimberger and in further view of Salim does not teach the computing system comprising display devices to provide visual feed-back of the system status, wherein the display comprises LEDS or a liquid crystal display and an LED indicating that the step of loading the second configuration data is in progress.

Packeteer teaches using a status LED and an LCD to allow users to view the operational status of the device (pages 7 and 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using LEDS or a liquid crystal display and an LED indicating that the step of loading the second configuration data is in progress of Packeteer to the system of Fallside in view of Trimberger and in further view of Salim to make the system more user friendly by providing visual indication of the system status.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside in view of Trimberger and in further view of Salim in further view of Granville (US 5,590,060).

Fallside in view of Trimberger and in further view of Salim does not teach audio feedback indicator of the system status.

Granville teaches using audio feedback indicator of the system status (5:65-6:1-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using audio feedback indicator of the system status of Granville to the system of Fallside

in view of Trimberger and in further view of Salim to make the system more user friendly by providing audio indication of the system status.

9. Claims 21, 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside (US 6,326,806) in view of Trimberger (US 5,426,379) in further view of Salim (US 6,628,653) and in further view of Klimenko (US 5,974,547).

Fallside in view of Trimberger and in further view of Salim substantially teaches the limitations of parent claims.

Fallside in view of Trimberger and in further view of Salim does not teach storing the second configuration data in a location remote from the PLD system and coupled to the computing system.

Klimenko teaches storing the second configuration data in a location remote from the PLD system and coupled to the computing system (hard disk on Fig. 4A and 4B).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add sending fourth packet acknowledging receipt of second packets of Klimenko to the system of Fallside in view of Trimberger and in further view of Salim to improve the system reliability by utilizing a remote storage place, independent from the main system.

10. Regarding claims 23-26, Fallside in view of Trimberger and in further view of Salim does not disclose that the location comprises storage on a second network, wherein the computing system accesses the storage via the second network or that the location is identified by an address of a node on the second network, wherein the second network comprises Internet and the indication information of the location comprises a URL.

An Official notice was taken in the previous Office action that it would be obvious to one of ordinary skill in the art at the time the invention was made to add this feature to the system of Fallside in view of Trimberger and in further view of Salim in further view of Klimenko to utilize Storage Area Networks and access to them through Internet as a commonly used standardized systems to conform the Fallside system to an established standard.

Response to Arguments

11. Applicant's arguments with respect to claims 1-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dmitry Levitan
Patent Examiner
04/12/05.

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